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EXAMINER

SHARMA, SUJATHA R

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/625,806	Applicant(s) DUCASSE, JEAN-CLAUDE	
	Examiner Sujatha Sharma	Art Unit 2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/24/03</u> . | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

1. Applicant's arguments filed 1/13/06 have been fully considered but they are not persuasive.

2. **103 rejection based on APA and Lim:**

The applicant argues (on page 9, paragraph 2) that the APA (admitted prior art) in view of Lim does not render the claims 1-8,11-13,15-17,19,20-23,25-30 and 32-34 obvious. The applicant argues that the APA does not disclose a decoder which analyzes the IF signals. Further (on page 10, paragraph 3) the applicant argues that Lim is not analogous art to the present invention.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

The examiner would like to draw the applicant's attention to the APA on page 1, paragraph 4, The APA discloses an antenna that receives signals and sends it to the decoder. Therefore, the PA does disclose an antenna and decoder. Though the APA discloses a decoder, it does not disclose a method where the decoder analyzes the IF signals and then sends commands to the active device in order to maintain an acceptable IF signal.

Lim, teaches a method where the received signals is sent to the decoder and the decoder analyzes the IF signals and then sends commands to the active device in order to maintain an acceptable

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IF signal. Therefore this teaching of Lim is used to modify the APA to ensure an acceptable level of the received signal.

In response to applicant's argument that Lim is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the APA and Lim are in the field of telecommunications and hence can be combined.

Further (on page 11, paragraph 1) the applicant challenges the examiner's official notice of using the DiSEqC process for the commands.

The examiner has provided the reference Kraft (2004/0028149) which teaches the use of DiSEqC process for commands and also discloses in paragraph 7 that this is an open standard by industry agreement.

In view of the above discussion, the rejection of the claims 1-8,11-13,15-17,19,20-23,25-30 and 32-34 as submitted in the previous office action and as discussed below is considered proper.

3. 103 rejection based on APA and Lim in view of Townsend:

The applicant argues(on page 13, paragraph 2) that Townsend fails to disclose on amplifier applying a gain of about 20 to about 91 dB. Thus Townsend fails to teach the recited range of set forth in claims 9,10,18,21,24,31.

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The examiner respectfully disagrees. The range of the amplification, which is claimed i.e. about 20 dB to about 91 dB is a design choice and the Townsend reference is evidence of the fact in col. 3, lines 43-52.

The applicant's attention is also drawn to MPEP 2144.05, which further discusses how ranges are not patentably distinct.

Therefore the rejection of the claims 9,10,18,21,24,31 with the combination of APA and Lim in view of Townsend as submitted in the previous office action and as discussed below is considered proper.

4. **103 rejection based on APA and Lim in view of James:**

The applicant argues (on page 14, paragraph 1) that James teaches a method where signals are transmitted via a single distribution cable whereas the claims 14 and 35 specifically recite signals transmitted upon a single wire.

The examiner respectfully disagrees and would like to point that the language of the claim is not distinctive and hence the James reference reads on the claim limitations.

Therefore the rejection of the claims 14 and 35 as submitted in the previous office action and as discussed below is considered proper.

5. **103 rejection based on APA and Lim in view of Bargroff:**

The applicant argues that the Bargroff reference does not disclose the use of a plurality of master decoders where each of the master decoders receives and analyzes the IF signals and sends commands to the active device in order to maintain an acceptable signal level.

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In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

APA discloses an antenna and a decoder to receive IF signals.

Lim discloses a method where the decoder analyzes the IF signals and sends commands to the active device to maintain an acceptable level of the received signal.

Bargroff discloses a method where multiple antenna feeds (see fig. 1, 122,124) receive the signals from the satellites and sends the signals to multiple decoders (see fig 1 and page 4, paragraph 47).

Therefore the combination of APA and Lim with Bargroff reads on the claimed limitations i.e. the use of a plurality of master decoders where each of the master decoders receives and analyzes the IF signals and sends commands to the active device in order to maintain an acceptable signal level.

In view of the above discussion, the rejection of the claims 36-40 as submitted in the previous office action and as discussed below is considered proper.

Claim Objections

1. Claims 27-29 are objected to because of the following informalities:

In claims 27-29, in line 4, “maintaining” should be replaced by – maintaining an acceptable IF signal--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8,11-13,15-17,19,20-23,25-30,32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admission of prior art, page 1, paragraph 4 (hereafter APA) in view of Lim [US 2003/0119463]

Regarding claims 1,30 the applicant in his APA teaches a system for terrestrial transmission of RF signals comprising:

- an antenna, where said antenna includes an active device and a passive device, where the passive device receives RF signals; See page 1, paragraph 4
- a decoder connected to the antenna, where decoder receives and analyzes IF signals from said antenna. See page 1, paragraph 4

However, the APA does not disclose a method wherein based on the analysis of the IF signals, sending a command to the active device in order to maintain an acceptable IF signal.

However, Lim, in the same field of endeavor, teaches a method of analyzing the IF signals in a RF receiver and based on the analysis of the IF signals, sending a command to the active device in order to maintain an acceptable IF signal. See fig. 4, page 2, paragraphs, 25 and

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Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to provide the above teaching of Lim in the decoder of APA in order to ensure linearity of a received signal.

Regarding claim 2, APA discloses a system where said active device down converts the RF signals to the IF signals. See page 1, paragraph 4

Regarding claim 3, APA further discloses a system where said active device includes at least one amplifier. See page 1, paragraph 4

Regarding claim 4, APA further discloses a method a where the at least one amplifier applies a gain onto the RF signals based upon commands from the decoder. See page 1, paragraph 7.

Regarding claim 5, APA discloses a method where the at least one amplifier applies a gain onto the IF signals based upon commands from the decoder. See page 1, paragraph 7

Regarding claim 6, APA discloses a method where the at least one amplifier applies a gain onto the RF signals and IF signals based upon commands from the decoder. See page 1, paragraph 7

Regarding claim 7, APA discloses a system where the passive device receives RF signals from a satellite and a broadcast center. See page 1, paragraph 5

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Regarding claims 8,33 APA discloses a system wherein the at least one amplifier includes at least one of a low noise amplifier and a low noise block converter. See page 1, paragraph 4.

Regarding claims 11,34 APA and Lim disclose all the limitations as claimed. However they do not disclose a method of using DiSEqC process for the commands.

However, the examiner takes official notice that Digital Satellite equipment control (DiSEqC) command is well known standard in Satellite communications.

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to use this standard to ensure compatibility of system components.

Regarding claim 12, APA further discloses a method where the active device includes at least one RF signal amplifier and at least one IF signal amplifier. See page 1, paragraphs 4,7.

Regarding claims 13,32 APA as modified by LIM discloses a method of sending command to the RF amplifier section to selectively activate the RF amplifiers.

APA further discloses a method wherein the active device also consists of IF amplifier as discloses in page1, paragraph 7.

Therefore it would have been obvious to one with ordinary skill in the art at the timer the invention was made to provide the above teachings of LIM to APA to send command to the IF amplifier section in order to ensure linearity of a received signal.

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Regarding claims 15,22 APA discloses method for a terrestrial transmission of RF signals comprising the steps of:

- receiving RF signals via an antenna; see page 1, paragraph 4
- downconverting RF signals to IF signals; See page 1, paragraphs 4,
- transmitting the IF signals via a wire to a decoder; see page, paragraphs 4,5

However, APA does not disclose a method of:

- transmitting commands via the wire to the antenna from the decoder upon receipt of the IF signals;
- adjusting the RF signals and the IF signals based upon the commands; and maintaining an acceptable IF signal for receipt by the decoder.

Lim, in the same field of endeavor, teaches a method of:

- transmitting commands via the wire to the antenna from the decoder upon receipt of the IF signals; See fig. 4, page 2, paragraphs, 25 and 26
- adjusting the RF signals based upon the commands; and maintaining an acceptable IF signal for receipt by the decoder. See fig. 4, page 2, paragraphs, 25 and 26

APA further discloses a method wherein the active device also consists of IF amplifier as discloses in page1, paragraph 7.

Therefore it would have been obvious to one with ordinary skill in the art at the timer the invention was made to provide the above teachings of LIM to APA to send command to the RF and IF amplifier section in order to ensure linearity of a received signal.

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Regarding claim 16, APA further discloses a method a where the at least one amplifier applies a gain onto the RF signals based upon commands from the decoder. See page 1, paragraph 7

Regarding claims 17,23 APA discloses a system wherein the at least one amplifier includes at least one of a low noise amplifier and a low noise block converter. See page 1, paragraph 4.

Regarding claim 19, APA as modified by LIM discloses a method of sending command to the RF amplifier section to selectively activate the RF amplifiers.

APA further discloses a method wherein the active device also consists of IF amplifier as discloses in page1, paragraph 7.

Therefore it would have been obvious to one with ordinary skill in the art at the timer the invention was made to provide the above teachings of LIM to APA to send command to the IF amplifier section in order to ensure linearity of a received signal.

Regarding claim 20, APA discloses a system wherein the at least one amplifier includes at least one of a low noise amplifier and a low noise block converter. See page 1, paragraph 4.

Regarding claim 25, APA discloses a system where the passive device receives RF signals from a satellite and a broadcast center. See page 1, paragraph 5

Regarding claim 26, APA and Lim disclose all the limitations as claimed. However they do not disclose a method of using DiSEqC process for the commands.

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However, the examiner takes official notice that Digital Satellite equipment control (DiSEqC) command is well known standard in Satellite communications.

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to use this standard to ensure compatibility of system components.

Regarding claims 27-29, Lim discloses a method of sending command to the amplifier section to selectively activate the amplifiers to maintain the linearity of the received signal. See fig. 4, page 2, paragraphs, 25 and 26.

3. Claims 9,10,18,21,24,31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admission of prior art, page 1, paragraph 4 (hereafter APA) and Lim [US 2003/0119463] in view of Townsend [US 5,323,423].

Regarding claims 9,10,18,21,24,31 APA as treated in claim 1 discloses all the limitations as claimed. However, the APA does not disclose a method wherein the at least one amplifier may apply again of 20 dB to about 91 dB.

Townsend, in the same field of endeavor, teaches a method wherein the amplifier applies a gain 20 dB gain is used in order to provide a linear transfer function of the received signal. See col. 3, lines 43-52.

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to provide the above teachings of Townsend in the decoder of APA in order to ensure linearity of a received signal.

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4. Claims 14,35, are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admission of prior art, page 1, paragraph 4 (hereafter APA) and Lim [US 2003/0119463] in view of James [US 2004/0060065].

Regarding claims 14,35 APA as modified by Lim discloses all the limitations as claimed. However they do not disclose a method where said commands and IF signals are transmitted upon a single wire connecting the decoder and antenna.

James in the same field of endeavor teaches a method where signals are transmitted from the antenna to the decoders via a single distribution cable. See page 1, paragraph 11.

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to provide the above teachings of James to APA in order to minimize cable between the antenna and the decoder and thus reduce losses.

5. Claims 36-40, are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admission of prior art, page 1, paragraph 4 (hereafter APA) and Lim [US 2003/0119463] in view of Bargroff [US 2004/0214537] .

Regarding claim 36, APA discloses a system for terrestrial transmission of RF signals comprising:

- a plurality of antennas, where each antenna includes an active device and a passive device, where the passive device receives RF signals, and the active device down converts the RF signals to IF signals; see page 1, paragraph 4
- a plurality of master decoders, where each master decoder receives and analyzes the IF signals from each antenna. See page 1, paragraph 4

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However, the APA does not disclose a method wherein based on the analysis of the IF signals, sending a command to the active device in order to maintain an acceptable IF signal.

Lim, in the same field of endeavor, teaches a method of analyzing the IF signals in a RF receiver and based on the analysis of the IF signals, sending a command to the active device in order to maintain an acceptable IF signal. See fig. 4, page 2, paragraphs, 25 and 26

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to provide the above teaching of Lim in the decoder of APA in order to ensure linearity of a received signal.

Further APA as modified by LIM does not disclose the use of a distribution switch.

Bragroff, in the same field of endeavor, teaches the use of a distribution switch between the antenna and the end user decoders. See Fig. 1 and paragraph 47.

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to use the distribution switch taught by Bragroff in the modified APA system in order to provide a method of signal distribution that is invariant to changes in signal powers.

Regarding claim 37, APA discloses a method where each active device of each antenna includes at least one amplifier and selectively applies a gain to at least one of the RF signals and IF signals based upon commands from each respective master decoder. See page 1, paragraph 7

Regarding claims 38,39 APA as modified by LIM discloses a method of sending command to the RF amplifier section to selectively activate the RF amplifiers.

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APA further discloses a method wherein the active device also consists of IF amplifier as discloses in page1, paragraph 7.

Therefore it would have been obvious to one with ordinary skill in the art at the timer the invention was made to provide the above teachings of LIM to APA to send command to the IF amplifier section in order to ensure linearity of a received signal.

Regarding claim 40, Bragroff further discloses a system where said distribution switch (130 IN Fig. 1) transmits IF signal to at least one further distribution switch (170 in Fig.1), wherein at least one further decoder connects the distribution switch to the at least one further distribution switch. See paragraphs 37-47.

Conclusion

2. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sujatha Sharma whose telephone number is 571-272-7886. The examiner can normally be reached on Mon-Fri 7.30am - 4.00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on 571-272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sujatha Sharma
March 20, 2006



Matthew Anderson

SPE 2618